

**ABSTRACT**

The disclosed systems and methods are directed to exchange of uncertainty information between interacting modules. Variances in the outputs of one module may be required as uncertainties in the inputs of another module. The disclosed systems and methods allow for simple and efficient communication of the uncertainty information between any modules. In one aspect, a system of integrated modules includes one or more application modules and at least one interface module. The application modules are adapted to receive inputs and/or generate outputs, including uncertainty distribution information. The interface modules are adapted to communicate with one or more application modules and to translate uncertainty information between a predetermined uniform format and an application-specific format. In one embodiment, an extensible markup language (XML) format is used for the predetermined uniform format.